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The Dragon Research

IN AN ESSAY discussing fantasy, Ursula LeGuin, the distinguished science-fiction novelist, writes about Imagination, Art, and Science as if they were one. We may be startled by this juxtaposition of concepts that our culture assumes are mutually exclusive; we see Science as separate and somehow superior to the non-empirical, "soft" areas of Imagination and Art. Our puritan, profit-oriented, masculine mind-set leads us to reject absolutely the essential human faculty of Imagination.

"We tend as a people," LeGuin writes, "to look upon all works of the imagination either as suspect or as contemptible. Almost all very technological peoples are more or less anti-fantasy."¹

She goes on to define Imagination as "the free play of the mind, both intellectual and sensory". Play, for her, means 're-creation', an open, fresh approach to the material at hand, material which may have become so familiar that it is accepted as permanently true.

When LeGuin speaks of the "free" play of the mind, she means a spontaneous, unconfined, almost innocent openness, without a preconceived goal and without an immediate object of profit. But she warns us that to be free is not to be undisciplined. To discipline something, whether it is the imagination, the senses, or the intellect, is to train it and to encourage it to grow, mature, and be fruitful. Most of us, however, have been taught to repress, to reject, indeed to fear our imagination, and we have never dared either to foster or discipline it.

"The discipline of the imagination may, in fact, be the essential method or technique of both art and science,"¹ LeGuin writes, because imagination is

"the recombination of what is known into what is new". Can you think of a better definition of research?

In her musings about why we reject fantasy, LeGuin cites excuses such as, "My wife reads the novels. I haven't got the time." Doesn't this ring a bell? It serves the purpose of sounding very masculine, very important, and at the same time puts down the 'feminine' attribute of romantic musing.

Or we may say, "Fairy tales are for kids. I live in the real world." And we thus deny that innocent openness to newness and even to danger that characterizes the free mind. Could we paraphrase "Fairy tales are for kids" to "Research is for academics. I live in the real world"? After all, we say, "We have to look after patients; we have to make a living."

An editorial in the Fall 1986 issue of our own *Family Medicine Research Update* has stated, "Most family physicians are busy caring for patients and do not have the time, energy, or motivation to take on research projects which they generate. We should not be surprised at this, since the majority of family physicians are in practice for the care of their patients."² The error here is in believing that research time is wasted in the practical setting of the real world. I would argue that it is in the real world of practice that research activity has the potential for doing the most good. We are in a unique position as family physicians to observe, listen, accept, record, and interpret the needs of our patients.

Why do we hesitate to do these things? Ursula LeGuin's essay was titled "Why are Americans Afraid of Dragons?" I ask you to consider, "Why are family physicians afraid of the dragon Research?" What holds us

back from turning a disciplined but open mind to fresh approaches to knowledge? What monsters do we fear? What is the nature of that fear?

Magee, a philosopher of science, has written that "in the end, most fears, including the most basic, such as fear of the dark, fear of the consequences of our actions, and fear of the future, are forms of *fear of the unknown*."³ Perhaps we should be clearer about what our fear of the dragon is based on. I suggest it is primarily based on the fear of the unknown. We are afraid of our ignorance — our ignorance of appropriate research methodology for the practice setting.

If the prime attitudinal problem is fear, and the basis of that fear is the ignorance of methodology, what is the prime methodological problem? I believe that the most difficult and fear-some aspect of research is formulating the research question and formulating it in such a way that should an answer be found, it will have an apparent and reasonably immediate usefulness.

Let us consider the hypothesis statement itself. The more information there is in a hypothesis, the more likely

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Editor's Note: Dr. Hennen is Professor and Chairman of the Department of Family Medicine at the University of Western Ontario. This editorial is an adaptation of introductory comments made to the Research Day in Family Medicine, Friday, September 25, 1987 in London, Ontario. Requests for reprints to: Dr. Brian Hennen, Department of Family Medicine, University of Western Ontario, London, Ont. N6A 5C1



Indications: RHINALAR is indicated for treatment of perennial and seasonal allergic rhinitis when tolerance to or effectiveness of conventional treatment is unsatisfactory.

Contraindications: 1. Active or quiescent tuberculosis or untreated fungal, bacterial or viral infections. 2. Hypersensitivity to the product. 3. Children under 6 years of age.

Warnings: 1. Glucocorticoids may mask some signs of infection, and new infections may appear during their use. 2. The safety of RHINALAR in pregnancy has not been established. Use of RHINALAR during the first three months of pregnancy is not recommended. If used during the second and third trimester, the expected benefits should be weighed against the potential hazards to the fetus. 3. In patients previously on high doses of systemic steroids, withdrawal of steroids may cause symptoms such as tiredness, aches and pains and depression. In severe cases adrenal insufficiency may occur necessitating a temporary resumption of systemic steroids. 4. RHINALAR is not recommended for those patients with a history of recurrent nasal bleeding.

Precautions: 1. Replacement of systemic steroids with RHINALAR should be gradual and carefully monitored by the physician. 2. Although absorption sufficient to produce systemic effects has not been shown in clinical studies with RHINALAR Nasal Mist, the potential of adrenal suppression still exists and this must be considered as a possibility with prolonged excessive usage. Patients on long-term therapy should be reassessed periodically to avoid unnecessary continued use. 3. Since onset of action may be somewhat slower than topical or oral sympathomimetic amines or antihistamines, RHINALAR should be used for several days before evaluating therapy. 4. If beneficial effect is not evident after approximately 7 days, the patient should be re-evaluated. 5. If hypersensitivity reactions occur during therapy, the drug should be discontinued and appropriate treatment should be instituted. 6. Corticosteroid therapy can decrease resistance to localized infection. If nasopharyngeal infections occur during therapy, appropriate treatment should be instituted. 7. Despite the very low level of absorption of flunisolide administered intranasally, the following must be kept in mind: a) corticosteroid effects may be enhanced in patients with hypothyroidism and in those with cirrhosis. b) in hypoprothrombemia, acetylsalicylic acid should be used cautiously in conjunction with corticosteroids. 8. Patients should be advised to inform subsequent physicians of the prior use of corticosteroids. 9. During local corticosteroid therapy, the possibility of atrophic rhinitis and/or pharyngeal candidiasis should be kept in mind. 10. RHINALAR should not be used during an asthmatic attack. 11. Because of the inhibitory effect of corticosteroids on wound healing, in patients who have had recent nasal surgery or trauma, a nasal corticosteroid should be used with caution until healing has occurred.

Adverse Reactions: Side effects noted with RHINALAR have been consistent with what one would expect in applying a topical medication to an already inflamed membrane. The most frequent side effect observed was a mild transient nasal burning and stinging. Occasionally this was severe enough to warrant discontinuation of RHINALAR therapy. Other side effects seen in patients treated with RHINALAR, in order of decreasing prevalence were: nasal irritation, epistaxis, runny and stuffy nose, sore throat, hoarseness and throat irritation. Exceptionally these may require discontinuation of therapy.

Symptoms and Treatment of Overdose: Acute overdose has not been reported. When used at excessive doses, the potential of steroid effects such as hypercorticism and adrenal suppression does exist. Decreasing the dose will abolish these manifestations.

Dosage and administration: RHINALAR Nasal Mist is for administration by the intranasal route only.

Usual Starting Dose: Adult: 2 sprays (each approximately 25 µg) into each nostril twice a day. Increase to maximum 3 times a day if needed. Children: For children 6 to 14 years of age, one spray (approximately 25 µg) into each nostril 3 times daily.

Maintenance Dose: After the desired clinical effect is obtained, the maintenance dose should be the smallest amount necessary to control the symptoms. Some patients may be maintained on as little as one spray (approximately 25 µg) to each nostril per day. Patients on long-term therapy should be reassessed periodically to avoid unnecessary continued use. There is no evidence that exceeding the maximum recommended dosage is more effective. Therefore, maximum daily dose should not exceed 6 sprays in each nostril for adults and 3 sprays in each nostril for children 6 to 14 years of age.

The effect of RHINALAR, unlike that of vasoconstrictors, is not immediate. Full therapeutic benefit requires regular usage. The absence of an immediate effect should be explained to the patient in order to ensure cooperation and continuation of treatment with the regular dosage schedule.

In the presence of excessive nasal mucus secretion or edema of the nasal mucosa, the drug may fail to reach the site of action. In such cases it is advisable to use a nasal vasoconstrictor for two or three days prior to RHINALAR.

Dosage form: RHINALAR Nasal Mist is an 0.025% aqueous solution of flunisolide in a 25 ml plastic bottle fitted with a metered pump device which delivers approximately 25 µg of flunisolide per spray via a nozzle which is inserted into the nostril.

For full information on using the device see patients direction for use. Product monograph available to health professionals upon request.



SYNTEX

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it is to be false. Statements with high information content are of lower probability and are more falsifiable than simple propositions, and therefore are far more refutable.

Furthermore, a good question will be based on a problem one actually faces. It is more likely to come out of a problem as it faces us *right now*. Peter B. Medawar, anatomist, Nobel Prize winner, and medical science philosopher, claims, "The great incentive to learning a new skill or supporting discipline is an urgent need to use it."⁴ In the day-to-day problem-solving situation of the family practice, we find ever at hand questions that demand investigation and answers. Family-practice research gives us an authentic problem, one to which we have a commitment, a need that asks to be met. Since the question is based on a problem, not on a theory, we can ignore the conventional distinctions between disciplines and allow our imaginations, our creative instincts, our free minds, to come into play.

Our concern is with human beings, unpredictable, unknowable in many ways, but demanding our disciplined, organized, dedicated, and imaginative attention. We can and must "recombine what is known into what is new."

As we think about our research questions, let us heed Ursula LeGuin. "It is by such statements as 'Once upon a time there was a dragon' or 'In a hole in the ground there lived a hobbit', it is by such beautiful non-facts, that we fantastic human beings may arrive, in our own peculiar fashion, at the truth."

Enjoy your dragon hunt! ■

References

1. LeGuin U. "Why are Americans Afraid of Dragons?" In: Wood S. (ed.) *Language of the Night, Essays on Fantasy and Science Fiction* New York: Berkley Books, 1979.
2. Bergen J. Editorial. *Family Medicine Research Update* 1986, Vol. 5, Number 2.
3. Magee B. *Popper* Glasgow: William Collins Sons and Co. Ltd., 1978.
4. Medawar PB. *Advice to a Young Scientist* New York: Harper and Row, 1979.

IDARAC

PRESCRIBING INFORMATION floctafenine 200 mg tablets. **THERAPEUTIC CLASSIFICATION:** Analgesic **ACTION:** IDARAC (flocetfenine) is an anthranilic acid derivative which has analgesic and anti-inflammatory properties. Fluctafenine has been shown to inhibit *in vitro* biosynthesis of prostaglandins PGE₂ and PGF_{2α}. Gastrointestinal bleeding determined by daily fecal blood loss was shown in one clinical trial to be approximately 1.2 mL after 1600 mg/day of fluctafenine compared to 10.4 mL after 2400 mg/day of acetylsalicylic acid. In normal volunteers, IDARAC was well absorbed after oral administration and peak plasma levels were attained 1-2 hours after administration and declined in a biphasic manner with an initial (α phase) half-life of approximately 1 hour and a later (β phase) half-life of approximately 8 hours. Fluctafenine and its metabolites do not accumulate following oral administration of multiple doses. After oral and intravenous administration of ¹⁴C labelled IDARAC, urinary excretion accounted for 40% and fecal and biliary excretion accounted for 60% of the recovered radioactivity. The main urinary metabolites are fluctafenic acid and its conjugate with minimal amounts of free fluctafenine.

INDICATIONS: IDARAC (flocetfenine) is indicated for short-term use in acute pain of mild and moderate severity. **CONTRAINDICATIONS:** IDARAC (flocetfenine) is contraindicated in patients with peptic ulcer or any other active inflammatory disease of the gastrointestinal tract and in patients who have demonstrated a hypersensitivity to the drug. **WARNINGS:** USE IN PREGNANCY: The use of IDARAC (flocetfenine) in women of childbearing potential requires that the likely benefit of the drug be weighed against the possible risk to the mother and fetus. Use of the drug in women who are nursing is not recommended. **USE IN CHILDREN:** The safety and efficacy of IDARAC in children have not been established and therefore is not recommended. The safety and efficacy of long-term use of IDARAC have not been established. **PRECAUTIONS:** IDARAC (flocetfenine) should be used with caution in patients with impaired renal function. In clinical trials with IDARAC, dysuria without apparent changes in renal function was reported. The incidence of dysuria was greater in males than in females and occurred primarily in the first morning voiding. It has not been established whether dysuria is related to dose and/or duration of drug administration. Patients taking anticoagulant medication may be given IDARAC with caution. Alterations in prothrombin time have been observed only in clinical trials where the administration of IDARAC was extended beyond two weeks. IDARAC should be used with caution in patients with a history of peptic ulcer or other gastrointestinal lesions. **ADVERSE REACTIONS:** The most commonly occurring side effects reported during IDARAC (flocetfenine) therapy were: **CENTRAL NERVOUS SYSTEM:** Drowsiness, dizziness, headache, insomnia, nervousness, irritability. **GASTROINTESTINAL SYSTEM:** Nausea, diarrhea, abdominal pain or discomfort, heartburn, constipation, abnormal liver function, gastrointestinal bleeding. **UROGENITAL SYSTEM:** Dysuria, burning micturition, polyuria, strong smelling urine, urethritis and cystitis. **ALLERGIC-TYPE REACTIONS:** Maculopapular skin rash, pruritis, urticaria, redness and itching of the face and neck. Other less frequently occurring side effects were: tinnitus, blurred vision, dry mouth, thirst, bitter taste, anorexia, stomach cramps, flatulence, hot flushes and sweating, tachycardia, weakness and tiredness. **SYMPTOMS AND TREATMENT OF OVERDOSE:** In case of overdose standard procedures to evacuate gastric contents, maintain urinary output and provide general supportive care should be employed. **DOSAGE AND ADMINISTRATION:** The usual adult dose of IDARAC (flocetfenine) is 1 to 2 tablets (200 to 400 mg), every 6 to 8 hours as required. The maximum recommended daily dose is 1200 mg. IDARAC is recommended for short-term management of acute pain. The tablets should be taken with a glass of water. IDARAC is not recommended for use in children. **AVAILABILITY:** Each tablet of IDARAC contains 200 mg of fluctafenine. Tablets are biconvex, round, cream-white, with W on one side and 200 on the other side. IDARAC is available in bottles of 100 tablets. Store at room temperature, protected from light. IDARAC is a Schedule F (prescription) drug. Product monograph is available upon request.

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